

Presse Press

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Immerse yourself in another world: Infrared LEDs from Osram make virtual and augmented reality applications even “more real”

Firefly SFH 4030 and SFH 4060 expands Osram’s photonics portfolio for eye-tracking systems

Virtual (VR) and Augmented Reality (AR) applications will become more widespread in the coming years. They have long played a central role in areas far beyond classic gaming. Various global players have used these technologies for training purposes or integrated them firmly into their daily work processes. As these applications become part of our everyday lives, some users are developing feelings of discomfort and dizziness when the virtual and real perceptions do not match. Osram’s new Firefly SFH 4030 and SFH 4060 help to prevent these side effects by enabling state-of-the-art eye-tracking solutions that provide a targeted point of reference, allowing users to safely immerse in other worlds.

Eye-tracking systems register the user's viewing angle and the movements of his or her eyes. The systems illuminate the eyes with infrared light and register the reflections with a camera sensor. Software then determines the exact position of the eyes and the viewing direction of the user to derive relevant information for the imaging elements of the system. The Firefly SFH 4030 and SFH 4060 feature compact dimensions of only 1.0 mm x 0.325 mm. Thanks to their low height of only 0.55 mm, the side emitting components can be easily installed. A special feature is the black cap, which makes the two IREDs "invisible" when installed.

Customers can choose between the 940 nm version (SFH 4030) or the 850 nm version (SFH 4060), depending on the requirements of their target application. With the SFH 4060, customers benefit from the high sensitivity of the sensors in this wavelength range. On the other hand, the 940 nm version (SFH 4030) avoids the disturbing "red glow" effect, where users see a red light.

"Eye-tracking offers a very intuitive way of human-machine interaction for AR and VR applications, including displaying important information about the focused object," explains Bianka Schnabel, Product Manager at Osram Opto Semiconductors. "With the IREDs' two wavelength options and black package, we are broadening the options for our customers, and at the same time, making system integration easier."

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Osram expands its photonics portfolio for eye-tracking systems with the two new infrared LEDs - Firefly SFH 4030 and SFH 4060.
Picture: Osram



Precise eye-tracking systems are essential for high-quality augmented and virtual reality solutions.
Picture: Osram

ABOUT OSRAM

OSRAM, based in Munich, is a leading global high-tech company with a history dating back more than 110 years. Primarily focused on semiconductor-based technologies, our products are used in highly diverse applications ranging from virtual reality to autonomous driving and from smartphones to networked, intelligent lighting solutions in buildings and cities. OSRAM utilizes the infinite possibilities of light to improve the quality of life for individuals and communities. OSRAM's innovations will enable people all over the world not only to see better, but also to communicate, travel, work, and live better. As of the end of fiscal year 2018 (September 30), OSRAM had approximately 26,200 employees worldwide. It generated revenue of more than €3.8 billion from continued operations in fiscal year 2018. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED400; trading symbol: OSR). Additional information can be found at www.osram.com.